



Thirty Days and 9,845 Birds Later

Quick Notes on 2010 HAVO Bird Survey:

- 29 total species recorded
- 10 native species
- 5 native endangered species

- Nēnē
- 'Io
- 'Akiapōlā'au
- Hawai'i Creeper
- Hawai'i 'Ākepa

☺ Generally, most birds have increased except a decline in 'I'iwi in a Kahuku tract and 'Ōma'o in the 'Ōla'a tract.

☺ 'Ōma'o, absent from the S.W. flank of Mauna Loa since the 1970s, was detected in the high elevation tracts of that region

malaria which has devastated whole populations of honeycreepers. The disease is passed through the bite of a mosquito and many native birds succumb within weeks of exposure. Fortunately, some populations of Hawaii 'Amakihi and 'Apapane have demonstrated a resistance to avian malaria after 180 years of intense exposure. These birds can even be found in high densities in warmer, lower elevations where mosquitoes are present. However, honeycreepers such as the endangered Hawai'i Creeper, 'Akiapōlā'au, and 'Ākepa are still quite susceptible to the disease. These birds are only found in small numbers in mature native forests above the range of mosquitoes.

Monitoring of bird populations allows resource managers to identify habitat critical for species survival. The NPS Inventory and Monitoring Program has begun a Landbirds Monitoring Protocol designed to collect data to determine species-specific estimates of numbers,

The landbirds of the Hawaiian Islands are among the most beautiful and unique birds in the world. The islands have among the highest percentage of endemic species found anywhere, primarily because of the their isolation and variety of habitats. Tragically, Hawaiian birds have experienced a litany of pressures resulting from introduced species, diseases, and the effect of man's manipulation of critical bird habitat.

Only 42 of the once 113 species of native landbirds persist in the islands. Thirty of the remaining species are considered threatened or endangered and 10 of them have not been seen in the last 40 years. The success of Hawaii's remaining species relies on the health of native forests, conservation actions, and the ability of species to adapt to pressures in the environment.

One of the biggest pressures is avian



'Apapane are one of the few commonly seen native honeycreepers still found in Hawai'i Volcanoes and Haleakalā National Parks. This one is feeding hungry chicks.

densities, and trends of native and non-native landbird populations. Surveys are being conducted in Hawai'i Volcanoes National Park (HAVO), Haleakalā National Park (HALE), and the National Park of America Samoa (NPSA) every few years to determine meaningful changes in bird populations over time.

Hawai'i Volcanoes National Park is the largest park in the Pacific Island Network and the first park surveyed with this protocol. HAVO contains huge tracts of native forest with one of the largest populations of native landbirds in the Hawaiian Islands. Eight tracts totaling 23,364 hectares have been identified for surveying within the park.

The monitoring team uses the point-transect method to record birds. Long (up to several miles) transects (straight lines) are established in each tract by aid of GPS, GIS, and compass navigation. Stations are marked 200m apart on each transect. Observers, or primary point counters, identify and record each bird heard or seen during an 8-minute period at each station. Distance from bird to observer is also recorded. Then

An 'Io, Hawaiian Hawk, eyes potential prey on the facing page. Only found on Hawai'i Island, this species is occasionally seen in Hawai'i Volcanoes National Park.

analysts use that data to estimate the density and abundance of each species. In March 2010, I led a team of six field technicians who were granted the responsibility of surveying HAVO for landbirds. This was a dream job for all of us because we would spend the majority of our time in beautiful native forests documenting Hawaii's most charismatic terrestrial wildlife.

Each of us had spent years in the field learning every sound Hawaii birds make, allowing us to "catch" them in our data books. We armed ourselves with binoculars and raingear and took to the forest to document the seldom seen honeycreepers of HAVO.

The crew woke up dark and early each morning to meet the birds in some of the most dense and isolated forests of Hawai'i Island. Our senses were in tune as we concentrated on every move and sound of the forest.

Thirty days and 9,845 birds later we concluded our survey effort. Results were positive for most native species. 'Apapane and Hawai'i 'Amakihi were by far the most abundant native species. 'Apapane occurred in densities far above all other species in every tract

with the exception of the prolific non-native Japanese White-eye, which unlike 'Apapane, occur in almost every forested habitat on Hawai'i Island. The 'I'iwi, perhaps Hawaii's most recognizable and iconic species, was detected in modest numbers in most tracts above 5,500 feet in elevation. The 'I'iwi is very susceptible to avian malaria, so the species is virtually non-existent in forests where mosquitoes are present. HAVO's endangered forest birds were detected in the mature 'ōhi'a dominated forests of the southeast slopes of Mauna Loa. Only four 'Akiapōlā'au were detected. Whereas 17 'Ākepa and 22 Hawai'i Creepers were documented during the surveys, along with more abundant and non-native species. Every endangered species occurred in numbers far too low to estimate abundance or a change in density. Unfortunately, it seems that even under federal protection from development and logging, these birds tenuously hang by a thin thread.

HAVO's high and cool volcanic slopes are a vital refuge for birds as a warming climate may push disease carrying mosquitoes higher into the remaining native landbirds' range. Long-term monitoring is a crucial tool the parks can use to ensure that they are doing everything they can to protect these unique birds.

— S. Judge

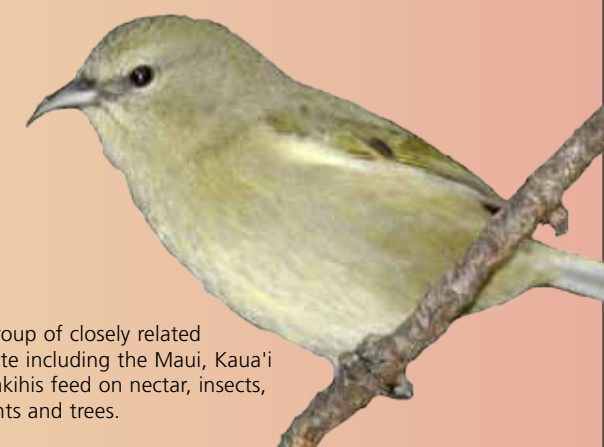


Crew leader Seth Judge smiles for a self portrait as he prepares to load a helicopter. Some of the most remote landbirds monitoring areas require that the team fly their gear to the worksite.



See the landbirds monitoring team in action !
(12Mb .mov file).

http://science.nature.nps.gov/im/units/pacn/videos/MP4_Videos/landbirds.mov



The Hawai'i 'Amakihi is one of a group of closely related honeycreepers found across the state including the Maui, Kaua'i and O'ahu 'Amakihi varieties. 'Amakihi feed on nectar, insects, juices, fruit pulp, and sap from plants and trees.

Next on the schedule is HALE in 2011 and NPSA in 2012; two of the Pacific West Region's most spectacular national parks and home to treasures such as the Kiwikiu, the 'Ākohekohe, the White-collared Kingfisher, and the Cardinal Honeyeater.